

REMARKS

Claims 13-23 were examined.

Specification

A replacement Abstract is provided.

Allowable Subject Matter

The Official Action stated that Claims 16-17 and 19-23, were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

New claim 24 is based on a combination of prior claims 13 and 16. Claim 24 corresponds to claim 17.

New claim 26 is based on a combination of prior claims 13 and 18-19. New claims 27-31 correspond to claims 20-23.

In view of the recitations of allowable claim 16 and allowable claim 19, allowance of these claims is solicited.

Claim 1 has been amended to include the features of claim 21.

Claim Rejections - 35 USC § 102

Claims 13-15 and 18 were rejected under 35 U.S.C. 102(e) as being anticipated by Komori (US. 6,552,926).

As to claim 13, the rejection states that Komori in Figures 1-15 disclose a component **(MRAM 1)** with a logic circuit **(access transistor 10 such as a logic circuit)** arrangement with configurable functionality, comprising a plurality of data lines **(electrodes 11, 12 such as a data line)**, at least a portion of the data lines being assigned at least one element **(TMR 7)** that can be switched **(an access transistor 10 such as a switch state circuit)** between two states with different discrete resistances **(for example, TMR 7 includes an electrodes 11, 12 coupled to the access transistor 10 in substrate MRAM 1)** by means of which element **(TMR 7)** the data line **(electrodes 11, 12 such as a data line)** is enabled or inhibited depending on the switched state, it being possible for the switching state of the element **(TMR 7)** to be stored in nonvolatile fashion and to be changed over rapidly **(for example, TMR 7 includes an electrodes 11, 12 coupled to the access transistor 10 in substrate MRAM 1)** characterized in that a pass transistor **(access transistor 10 such as a pass transistor includes a source/drain 9 and control gate 8)** connected into the data line **(electrodes 11, 12 such as a data line)** is inhibited or enabled by means of the element **(TMR 7)**, or in that the element **(TMR 7)** itself is used as the pass transistor that enables or inhibits the data line **(electrodes 11, 12 such as a data line)** **(for example, TMR 7 includes an electrodes 11,12 coupled to the access transistor 10 in substrate MRAM 1).**

Traverse

Komori discloses a device with a TMR cell 7 and an access transistor 10 (e,g, see Fig,1). Data stored in the TMR cell 7 can be read by applying a voltage across the cell's free-spin layer 4 and the bit line 3a as well as a Voltage to the transistor's "readout word line" 8 (see col.6 beginning at line 50). The voltage at the readout word line 8 switches on the transistor 10 so that an electric current flowing into the transistor 10 can be read. The amount of this current depends on the data stored in the TMR cell 7.

With this analysis, the rejection argues that Komori's access transistor 10 is used to enable or inhibit a "data line".

But in contrast to our present invention, Komori's transistor 10 is not switched with the help of the TMR cell 7 but with "a voltage to the readout word line" (see col.6, lines 50-55) which may be provided by some external source. This is a fundamental difference.

In other words; according to Komori, to enable or inhibit the data line for the current measurement a voltage from an external source is applied to the gate of a transistor, the source and drain of which are connected to the data line. The TMR cell itself is connected to the drain or source of the transistor.

According to the present invention, the TMR cell itself is used to enable or inhibit a data line. For this, the TMR cell

is connected to the transistor's gate. This has the effect that - depending on the TMR cell's status, the data line is able to conduct a current or not.

The following figures show the difference between Komori (Fig.1) and the claimed invention.

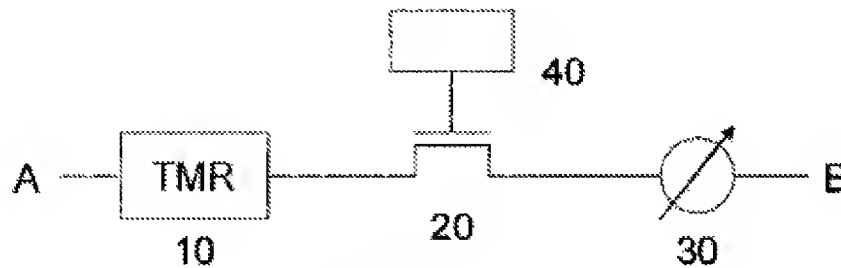
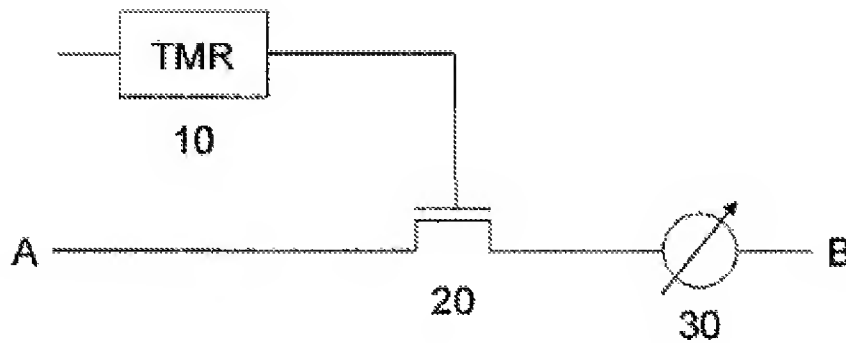


Fig.1 (Komori)

According to Komori, a current measurement device 30 measures a current between two points A and B. The current shall be a measure for the status of the TMR cell 10. A switch 20, actually an access transistor, can be controlled by some external source 40 which supplies a voltage. As soon as the switch 20 is closed the current measurement can be performed. Concretely, the gate of the transistor 20 works as the switch, i.e., as soon as the voltage source 40 supplies a voltage the transistor 20 gets conductive and the currents measurement can be performed.



In contrast, according to the claimed invention, again a current measurement device 30 measures a current between two points A and B as soon as a switch 20 is closed. The switch 20 may be a pass transistor. The gate of the pass transistor 20 is connected to the TMR cell 10 such that the transistor/switch 20 gets conductive depending on the status of the TMR cell 10.

Claim 13 has been amended in this regard. No new matter is entered by this amendment.

In Komori, there is no disclosure that a pass transistor connected into the data line is inhibited or enabled by means of the element, where the gate of the pass transistor is connected to the element and the state of the element controls the pass transistor.

Reconsideration and allowance of claim 13 and it's dependent claims are respectfully requested.

This response is believed to be fully responsive and to put the case in condition for allowance. Entry of the amendment, and an early and favorable action on the merits, are earnestly

requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Should there be any matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item(s):

- a new or amended Abstract of the Disclosure